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ABSTRACT

Using a Vygotskian perspective, the researchers investigated the interaction of secondary school language learners engaged in a dictogloss task that called for collaborative reconstruction of a text. The investigation focused on the students' behaviors that were detrimental to effective interaction and made it less likely that students would be able to provide scaffolded help for the other member of their dyad. Participants in the study were 19 English-as-a-Second-Language (ESL) learners from China and Korea who were studying at a girls' secondary school in Singapore. Data sources were transcripts of one dyad's interaction, student journals, questionnaires, and interviews. A wide range of detrimental behaviors were displayed by the participants in the current study. However, the overall picture provided by the data suggests that with help from educators, students can become more skilled at assisting one another and more willing to do so. Ideas are put forward as to how educators can supply such help. (Contains 28 references.) (Author/KFT)

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# Detrimental Behaviours in Collaborative Tasks

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Abstract

Using a Vygotskian perspective, the researchers investigated the interaction of secondary school second language learners engaged in a dictogloss task that called for collaborative reconstruction of a text. The investigation focused on the students' behaviours that were detrimental to effective interaction and made it less likely that students would be able to provide scaffolded help for the other member of their dyad. Participants in the study were 19 English as a Second Language learners from China and Korea who were studying at a girl's secondary school in Singapore. Data sources were transcripts of one dyad's interaction, student journals, questionnaires and interviews.

A wide range of detrimental behaviours were displayed by the participants in the current study. However, the overall picture provided by the data suggests that with help from educators, students can become more skilled at assisting one another and more willing to do so. Ideas are put forward as to how educator can supply such help.

## Introduction

Group activities have become increasing common in second language teaching as well as in other areas of education (Antil, et al., 1998; Jacobs, et al., 1997). The use of these group activities finds support in research in a wide variety of subject areas including research on second language teaching (e.g., Akcan, 2001; Slavin, 1995). Theoretical support for the use of groups as an aid to second language acquisition derives from a number of perspectives. Among the most prominent are interactionist perspectives. Long (1996) and Pica et al., (1996) propose that interacting with others, including peers, enables students to gain more comprehensible input which, in turn, promotes L2 acquisition.

Swain (1998) points out that comprehensible input might be insufficient to explain the acquisition process. She posits that interaction could play yet another role, that of providing students opportunities to produce output in their L2. While producing output, learners may, Swa argues, notice the gaps in their L2 proficiency when they attempt to express what they wish to convey, and this awareness or "noticing" may help in the language acquisition process.

Furthermore, Swain (1998) has suggested looking beyond input or output to understand the processes of language learning, to examine the interaction process itself, as "a close examination of dialogue as learners engage in problem-solving activity is directly revealing of mental processes" (p. 142). Her suggestion signals a shift of interest from input-output models to a more comprehensive view of interaction that incorporates an understanding of speech activity as socio-cognitive activity as well as a contributor of language development, as exemplified by the work of Appel and Lantolf (1994).

It has been felt that the earlier views of language (the input-output models) "masked the fundamentally important mechanisms of L2 development and in the end the social context is impoverished and undervalued as an arena for truly collaborative L2 acquisition" (Donato, 1994, p. 34). However, one theoretical perspective need not be exclusive of the other - Krashen's (1981)

i + 1 hypothesis might be seen as being extended by Vygotsky's zone of proximal development which explains how the +1 takes place (Schinke-Llano, 1993).

**Socio-Cultural Theory**

***"...only through the other do we become ourselves..."***

(Vygotsky, 1983, p. 144, cited in Kozulin & Presseisen, 1995, p. 69)

This aphorism reflects the three basic assumptions that characterize Vygotsky's study of the development of human cognition and consciousness:

1. Individual mental functioning has sociocultural origins.

Vygotsky asserts that all individual mental functions have their origins outside of the individual, in social interactions, not in the biological structures or the solipsistic learning of the individual as is typically assumed (McCafferty, 1994; Minick, 1987). Wertsch and Tulviste, (1992, pp. 55-56) suggest that this view of the mind might be thought of as one "extending beyond the skin" and therefore is understood not as an attribute or property of the individual. The developmental (or genetic) process in which external processes are transformed to create internal processes is that of internalization (Wertsch & Stone, 1985), i.e., when "the social voice becomes the inner voice" (Daniels, 1996, p.10).

2. Human action is mediated by signs, tools and other individuals.

Vygotsky proposes that higher mental processes are functions of mediated activity and envisages a theoretical programme which accounts for three classes of mediators: material tools, other human beings and psychological tools (Kozulin, 1990). Material tools (e.g., hammers, bulldozers and computers) allow humans to organize and alter their physical world (Appel & Lantolf, 1994). Individuals play the role of mediators of meaning during interactions. Human mediation, therefore, is linked to the use of psychological tools, such as language, signs and symbols which mediate humans' own psychological processes and empower them to organize and control mental

processes such as voluntary attention, logical problem solving, planning and evaluation, voluntary memory and intentional learning.

3. Development of individual mental functioning can only be adequately understood by the use of a genetic method.

Vygotsky theorises that any complete explanation of a psychological function must be based on an examination and an account of its origins and its development. He postulates:

> We need to concentrate not on the product of development, but on the very process by which higher forms are established … The heart of the genetic method is to study a psychological process as it is undergoing qualitative transformations, for it is in the latter that both the nature and the direction of development can be understood (1978, pp. 64-65).

**The Zone of Proximal Development (ZPD)**

Embedded in the three themes outlined above is Vygotsky's famous notion of the zone of proximal development (ZPD), a theoretical construct in which the process of internalisation takes place as external, higher mental functions begin to operate on a intramental plane. He defines this as "the distance between a child's actual developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, cited in Wertsch, 1979, p. 2).

The guidance and collaboration that occur inside the ZPD were operationalised by Wood, Bruner and Ross (1976) as scaffolding. Wood et al. (1976) emphasise the role of the tutor as a provider of scaffolding for the novice. From this perspective, the relationship in the ZPD is an asymmetrical one, with a more experienced person assuming an altruistic, didactic role to assist the novice. However, researchers such as Donato (1994) have shown that it is possible for peers

to be engaged in the ZPD. van Lier (1996) has taken this a step further by suggesting that even less capable peers and the students themselves have inner resources with which extend their ZPD.

Donato (1994) investigated how L2 students co-construct language learning experiences in a classroom setting. He found that learners were indeed able to collectively construct a scaffold for each other's performance, noting that each student appeared to control only a specific aspect of the desired construction. The students also appeared to be able to provide feedback and present idealised versions of the task to be performed. Webb and Kenderski (1984) examined different types of help given to each other by peers. They found a positive relation between achievement and scaffolded help given by peers.

**Dictogloss and Related Studies**

Dictogloss, also known as grammar dictation (Storch, 1998; Wajnryb, 1990), is a teaching technique that consists of a dictation exercise during which the students take down notes in the form of content words in order to reconstruct the text with one or more peers before participating in a class discussion of the text. During this task, students are encouraged to engage in metatalk, observation of which, Swain (1998) suggests, will help us to understand the language learning process.

The learners' involvement in the task promotes reciprocal interaction during which language learning and cognitive development is facilitated. They not only jointly construct knowledge and scaffold each other's learning but are presented with opportunities to make, test and change hypotheses about language as they reconstruct the passage.

**Research Questions**

The following questions were addressed in this research:

1. When working on collaborative tasks, what behaviours do students exhibit that might be detrimental to scaffolding and effective group functioning?
2. What caused these detrimental behaviours?

## METHODOLOGY

### Participants

Participants in the study were 19 secondary three students at a girls' secondary school in Singapore, eighteen from the People's Republic of China (PRC), including two from Hong Kong, and one from Korea. Their first languages were Mandarin, Cantonese and Korean. English is the medium of instruction in Singapore schools. The students, who were between 14 and 17 years old, had been in Singapore for about six months. These students were considered high achievers in their home countries and were studying in Singapore on scholarship. In their home countries, they had studied English as a foreign language for about 4 years and at the time of their arrival had been diagnosed to possess competence at primary five (Singapore) level in a written test. Their oral competence was observed to be somewhat lower. All participants were informed of the rationale of the study. Six participants, five from mainland PRC and one from Hong Kong, were randomly selected for audio recording as they worked in pairs on dictogloss tasks.

Participants did not attend mainstream English classes even though they joined their secondary three peers (aged 15±) for all other subjects. Like their mainstream peers, these foreign students had 3.25 hours of English lessons in an eight-day cycle. To increase the foreign students' use of and exposure to their L2, they also had an extra two-hour lesson outside normal curriculum hours twice a week. The dictogloss sessions were conducted during these periods for the whole class by the first author who was familiar to them as one of the teachers involved in their English education, even though she had not formally taught them until the study began.

### Data Collection

Sources of data for the current study consisted of audio recordings of discussions during four sessions in which the dictogloss procedure was used, two questionnaires administered to the

whole class, and one-on-one audio-taped interviews with the six audio-taped students. The questionnaires asked about how participants felt about the interaction. One questionnaire asked about the early dictogloss sessions, while the second questionnaire asked about the later sessions. Additionally, after each session, participants wrote journal entries describing the way they worked together as well as their thoughts and feelings about the way they had worked. These journal entries were collected at the following sessions with the lead researcher.

In all, the lead researcher had 11 sessions with the participants. The first three were training sessions, followed by four sessions of audio-recording during the dictogloss task, ending with four sessions for the administration of the second questionnaire, interviews with students by the lead researcher who speaks Mandarin and Cantonese in addition to English, and students' checking of the tapescripts and interview reports. Journal entries were collected from the students after each of the first 7 sessions. A more detailed description of what occurred in the sessions is presented in Table 1.

*Table 1: Schedule of Data Collection*

| Session | Activity with Students | Data Collected |
|---|---|---|
| 1 | ▪ Warm-up session with students<br>▪ Explanation of the rationale for study<br>▪ Explanation of the dictogloss procedure<br>▪ Describing rationale for journal entries<br>▪ Journal writing | • Journal entries |
| 2 | • Demonstration of the benefits of collaboration<br>• Student roleplay/modeling of cooperative work behaviour<br>• Student practise cooperative behaviour during co-construction of text<br>• Journal writing | • Journal entries |
| 3 | • Dictogloss practise<br>• Journal writing | • Journal entries |
| 4 | • Dictogloss procedure – Recount (anecdote)<br>• Journal writing | • Audio recording of students' interaction<br>• Journal entries |
| 5 | • Dictogloss procedure – Recount (news report)<br>• Journal writing | • Audio recording of students' interaction<br>• Journal entries |
| 6 | • Dictogloss procedure – Report (survey)<br>• Journal writing<br>• Questionnaire 1 | • Audio recording of students' interaction<br>• Journal entries<br>• Questionnaire 1 |
| 7 | • Dictogloss procedure – Exposition<br>• Journal writing | • Audio recording of students' interaction<br>• Journal entries |
| 8 | • Questionnaire 2 | • Questionnaire 2 |
| 9 – 11 | • One- to-one interviews<br>• Students check accuracy of tapescripts<br>• Students check accuracy of interviewer reports | • Tapescripts<br>• Interviewer reports |

## RESULTS

### Results from Data for Research Question 1

A study using the same data (Lim & Jacobs, forthcoming) had found that these participants were able to provide each other with a limited but significant and increasing amount of scaffolding. In fact, scaffolding functions formed nearly a third of the dyad's total on-task talk. Even more encouraging is the fact that this percentage increased after the first recorded session.

The first research question in the current study asked: When working on collaborative tasks, what behaviours do students exhibit that might be detrimental to scaffolding and overall effective group functioning? Data from the tapescripts were used to address this question. One set of four recordings from one of the three dyads was chosen for analysis. This dyad was selected because of the interesting nature of their interaction and because of problems in the audiotapes of the two other dyads. The first step in analyzing the tapescripts was to segment on-task, about-task, and off-task episodes using definitions adapted from Guerrero and Villamil (1994):

Only on-task episodes were coded for detrimental behaviours. A set of six categories was created to describe these behaviour. These categories are explained and exemplified in Table 2.

***Table 2: Behaviour Detrimental to Successful Interactions in the ZPD***

| |
|---|
| **Erroneous Feedback (EF):** |
| Giving misleading feedback or inaccurate information about the original text |
| It includes erroneous application of grammar rules, or offering garbled explanations to meaning of text or inconsistent arguments to justify personal choice of lexis or syntax. Also includes pointing out problems and expressing doubt when the solution is already correct. e.g., L283 – L284, tapescript 1. |
| S2: ya, ah, just now I said that I want to end it, to use word, *is*, if the prescription is effective at |

all.

S1: *if it is effective at all? if it is effective at all*? did you, do you find out … there is some problem with the meaning?

S2 is offering an appropriate suggestion on ending the sentence that the pair are constructing but S1 casts doubt by pointing out that there is "some problem with the meaning" thereby giving her partner feedback that is not helpful.

**Assertions without Explanations (A):**

Making assertions or categorically stating a point of view without offering any explanation or justification

This means repeating a point of view without elaboration when partner expresses doubt or request for clarification. e.g., L263 – L265, tapescript 1.

S2: you used *positive effects* and I used *effective.*

S1: what I hear is, what I hear is just *positive effects, then the man replied* …

S2: oh, I am sure I heard the word *at all.*

When S2 points out their difference of opinion in their choice of vocabulary in a non-negotiating stance, S1 attempts to justify her choice by saying that that is what she has heard. S2 cuts off her explanation by a short blunt assertion that she is sure of what she has heard.

**Lack of Frustration Control (FC):**

Expressing overt exasperation with partner or task

This frustration can manifest itself in words or tone of voice. It includes non-verbal utterances such as making noises of annoyance and sighing in vexation. e.g., L208 – L212, tapescript 1.

S1: skipping?

S2: ya.

S1: no! cannot!

S2: why cannot?

S1: erm, can you listen to me?

In this exchange, S1's strong objection of S2's insistence on using the word "skipping" is registered in both the tone of voice and the imperative that she employs is an indication her exasperation.

**Inauthentic Questions (NQ):**

Posing questions that do not genuinely seek clarification or understanding

These include instances where a question is asked with no particular purpose beside trying to confirm personal views and defending their own reconstructions. Partner's contrary opinions are not considered in response to questions. e.g., L193 – L197, tapescript 1.

S2: do you think *skipping* is better that *skip*?

S1: huh?

S2: *skipping* is better than *skip*.

S1: *skip*?

S2: *skipping*.

In this exchange, S2 poses a question that is intended as a statement of her ideas rather than a genuine solicitation of opinion. When S1 indicates doubt twice, S2 restates her ideas in a statement indicating that she is not asking a question at first.

**Aggressive Interruptions (I):**

Interrupting partner when she is in the middle of an explanation

This includes cutting off a partner's responses, sometimes to the extent that partner expresses overt signs of stress or when the partner has to ask to be allowed to continue her discourse. e.g., L60 – L62, tapescript 1.

S2: I think, as a doctor, he/he make sure …

S1: /and the other, the other …

S2: can you, can allow me to speak a complete sentence …

**Abandoning Negotiations (NG):**

Accepting or conceding to partner's suggestion even when not fully convinced of its accuracy or correctness

These are instances where students give up negotiations and pursuit of a better alternative to appease insistent partner or relinquishing responsibility to teacher to provide the correct version. e.g., L290 – L293, tapescript 1.

S1: but if you want to 'jia qiang yu qi' [exasperated laughter] but the meaning is pos... op, opposite. if you use *at all* ... aiyoh [sounds of exasperation]

S2: okay [inaudible] yours ...,...,...,..., I don't know, okay, okay, I think yours is ...

S1: uh::uh::::! [despair]

S2: accept yours.

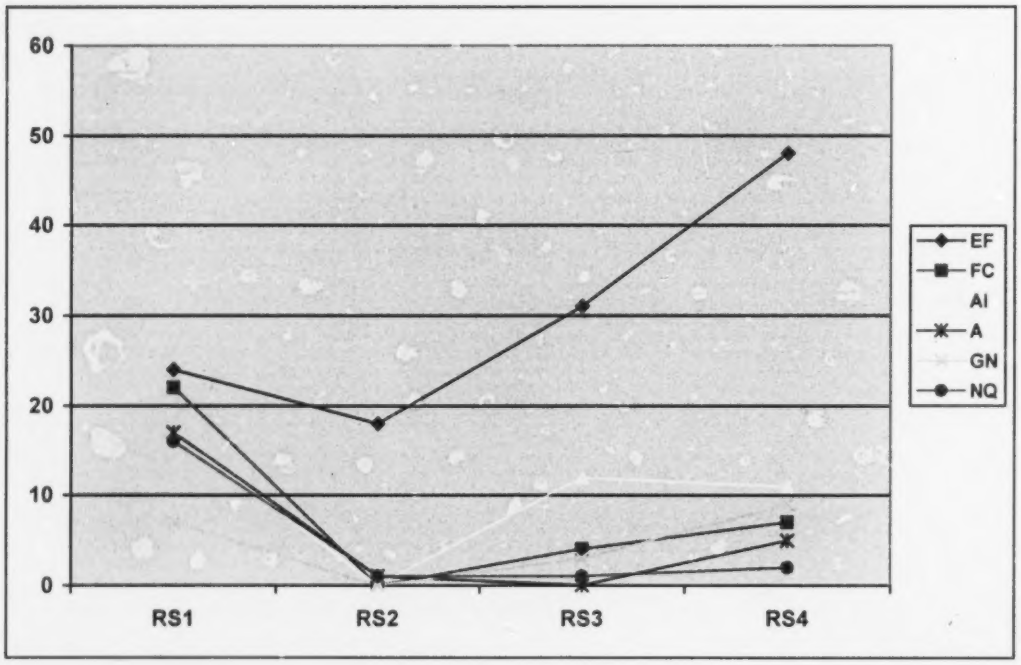
In the face of strong objection and exasperation expressed by her partner, S2 accepts S1's construction despite her doubts about its appropriacy.

*Inter-rater agreement*

One of the four tapescripts was randomly chosen to be coded. The first researcher collaboratively coded the first 25% of the tapescript with two post-graduate students. The rest of the same tapescript was coded independently by the raters, and their codings were compared to determine the level of inter-rater agreement. Of the 256 utterances coded, there were 16 instances of disagreement, giving an inter-rater reliability score of 93.8%. Discussion was then held to arrive at unanimous decisions. The remaining three tapescripts were coded by the lead researcher.

The distribution of detrimental behaviours by type over the four recorded sessions is presented in Figure 1.

*Figure 1. Detrimental Behaviour in Recorded Sessions (RS) 1, 2, 3 and 4*




**Key to Abbreviations**

| | | | |
|---|---|---|---|
| EF: | Erroneous Feedback | A: | Assertions without Explanations |
| FC: | Lack of Frustration Control | GN: | Giving up Negotiations |
| AI: | Aggressive Interruptions | NG: | Inauthentic Questions |

**Results from Data for Research Question 2**

The second research question asked: What caused these detrimental behaviours? To examine this question, data from the students' journal entries, questionnaire responses and interviews were utilized.

Erroneous feedback contributed to a very high percentage (47%) of the dyad's detrimental behaviours. There are probably a number of reasons for this, including the dyad's lack of sufficient linguistic knowledge. This conclusion might be drawn from the high incidence

of erroneous feedback in RS1, RS3 and RS4 during which the students found the passages difficult. Also, it has been pointed out that the more difficult the task is in relation to ability, the greater the effect of anxiety on a process (Tobias, 1986). In RS2, when the students reported that the passage was simple, the incidents of erroneous feedback dropped significantly in comparison to the other sessions.

Among the other causes of detrimental behaviours were:

1. Resistance to collaboration

Having come from a traditional teacher-fronted classroom, participants doubted the ability of their peers to assist their performance and learning, and so hung on to their own beliefs and knowledge, which were sometimes erroneous.

2. Feelings of inadequacy and stress resulting from collaborative work

Feeling that they did not know enough to share, the students thought they were of little assistance in facilitating their partner's learning. Stress arose from the fact that they could not be sure of the accuracy of their own contributions while doubting their partner's opinion.

3. Feelings of frustration and unhappiness

These affective responses appear to have stemmed from two sources: one from participants' inability to deal with cognitive conflict, and the other from tension in the relationship with their partners. By their own admission in their journal entries and responses in the interviews, participants spent a great deal of time quibbling over details and feeling upset. In the event of cognitive conflict, interaction was sometimes stalled by adamant silence, with incidents of aggressive interruptions and assertions. Students' requests in questionnaire 1 for lessons on how to carry out a discussion and work collaboratively is perhaps indicative of the reasons for these unproductive interactions.

However, the data suggest that participants' responses to collaborative work were somewhat changed, in the following ways, towards the end of the study.

1. More positive attitudes toward collaborative work

In the later journals, the students reflected on their previous attitudes and acknowledged their own change in a self-congratulatory manner. It appears that the benefits of collaboration were realized only after they had practised collaboration over a period of time and reaped the benefits.

2. Feelings of efficacy

As the sessions progressed, more and more participants were able to report success in their collaborative endeavours and ability to communicate. The dyads whose data transcripts were analyzed rated the success of their partnership highly and noted with pride and pleasure during the interviews that they were working well together toward the end of the study. This improved working relationship is seen in the increasing use of the uniting "we" over the four sessions. In the first session, the dominant pronouns used were "mine" and "yours" or "you" but as the sessions progressed, these metamorphosed into "we". In the first session, the collective "we" was used only 7 times, but significantly increased to 25, 27 to 43 times respectively over the subsequent three sessions. A point of interest is that these positive feelings stemmed from their being able to work cordially together despite cognitive differences, rather than from success in solving identified language problems in the dictogloss task.

3. Socio-affective well-being

Students reported enjoying a better social relationship with their partners whom they had gotten to know better and were more relaxed with towards the end of the study. They also expressed awareness of the need for affective self-regulation as well as intellectual humility in order to maintain healthy working relationships.

**DISCUSSION**

The present study into detrimental behaviours during collaborative work considered along with Lim and Jacobs (forthcoming), which examined positive instances of scaffolding behaviours, presents a picture that is at once pessimistic and optimistic. The picture is pessimistic because the students in this study were greatly lacking in both their skill at scaffolding and in

their attitudes towards collaboration. The picture is optimistic because light could be seen beyond the dark clouds. Students were able to do some scaffolding, and some improvement was seen in their stance towards collaboration. Below, based on the findings of these two studies, we make suggestions on how to build on students' potential for collaboration.

1. Instruction in how to collaborate

Basically, the students just did not know how to collaborate nor handle cognitive conflict. This is not surprising given their lack of experience with classroom collaboration. This brings to mind the constant reminders by proponents of cooperative learning, e.g., Johnson and Johnson (1994) that arbitrarily putting people into groups will not produce collaboration because working together is not an easy process. Thus, Johnson and Johnson (1994) recommend explicit training in teamwork skills.

2. Attention to affect

The findings suggest that the success of collaborative work is influenced to a considerable extent by the social relationships and affective responses to the context of learning and the persons in the collaborative set-up as has been suggested by other researchers (e.g., Nyikos & Hashimoto, 1994). In recognition of this, educators may want to help students understand the benefits of cooperation and spend time attempting to build positive feeling within learning groups via teambuilding and classbuilding activities. Because such activities often overlap with the teaching of language, as does the above-mentioned explicit training in teamwork skills, language educators have the advantage compared to educators in other subject areas of being able to combine preparation for cooperation with their normal syllabus.

3. Patience and persistence

As noted in the data from Research Question 2 and from the data on scaffolding from Lim and Jacobs (forthcoming), students' attitudes towards collaboration and ability to collaborate improved over the course of the data collection. This is not surprising. Any skill takes time to acquire. Further, we cannot expect students to scaffold as well as trained teachers do. After all,

these teachers spent years training and practicing to reach such a high level of scaffolding ability and to develop the will to help in the face of a variety of obstacles.

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